

What is claimed is:

1. A computer input device comprising:
a housing having an outer wall; and
an image projection system substantially contained within the housing and
configured to display an image on the outer wall.
2. The computer input device of claim 1, wherein the computer input device is a
mouse.
3. The computer input device of claim 1, wherein the image projection system
includes a light source, a light blocker having a light transmissive portion and a light blocking
portion, and a lens.
4. The computer input device of claim 3, wherein the image projection system
further includes a mirror disposed in a light path between the light source and the displayed
image.
5. The computer input device of claim 3, wherein the light blocker is optically
located between the light source and the lens.
6. The computer input device of claim 3, wherein the lens creates a focal point
for the displayed image located substantially on the outer wall.
7. The computer input device of claim 3, wherein the lens is optically located in
a light path between the light source and the light blocker.
8. The computer input device of claim 2, wherein the image projecting system
includes a light blocker and optics configured to enable the introduction of collimated light to
the light blocker.

9. The computer input device of claim 1, wherein the image projecting system includes an active LED matrix.

10. The computer input device of claim 9, wherein the active LED matrix is configured to display alphanumeric data.

11. The computer input device of claim 1, wherein computer input device is one of a trackball, mouse, and keyboard.

12. The computer input device of claim 1, wherein the image projection system includes a laser.

13. The computer input device of claim 1, further comprising multiple predetermined image forming devices disposed within the housing, each image forming device producing a different displayed image.

14. The computer input device of claim 13, further comprising a device for moving the image forming devices relative to an optical path.

15. The computer input device of claim 14, wherein the device for moving the image forming devices is configured to linearly move the image forming devices.

16. The computer input device of claim 14, wherein the device for moving the image forming devices is configured to rotatably move the image forming devices.

17. The computer input device of claim 1, wherein computer input device is a pointing device.

18. The computer input device of claim 1, wherein computer input device includes a motion detecting system.

19. The computer input device of claim 1, wherein the outer wall is translucent.

20. The computer input device of claim 1, wherein the outer wall includes inner and outer surfaces, with the inner surfaces facing an interior of the computer input device and the outer surface facing an exterior of the computer input device.

21. The computer input device of claim 1, wherein the outer wall includes a top portion, a right side portion, and left side portion, and a rear portion, wherein the image projecting system is configured to display an image on one of the right side portion and the left side portion.

22. The computer input device of claim 1, wherein the outer wall includes a top portion, a right side portion, and left side portion, and a rear portion, wherein the image projecting system is configured to display an image on the rear portion.

23. The computer input device of claim 1, wherein the outer wall includes a top portion, a right side portion, and left side portion, and a rear portion, wherein the image projecting system is configured to display an image on the top portion.

24. A computer mouse comprising:
a housing having an outer wall;
a plurality of actuators;
a motion detecting system for determining relative movement of the mouse;
and
an optical projection system including a light source and a movable image forming element located within the housing and configured to project an image onto the outer wall.

25. The computer mouse according to claim 24, wherein the optical projection system includes an LED, a mirrored surface, and optics.

26. The computer mouse according to claim 25, wherein the optical projection system includes an LED and collimating optics.

27. The computer mouse according to claim 26, wherein the optical projection system includes an array of LEDs.

28. The computer mouse according to claim 26, wherein the optical projection system includes a laser.

29. The computer mouse according to claim 26, further comprising means for changing the projected image.

30. A method of notifying a user of an occurrence via a computer input device configured to project images, the method including the steps of:
projecting a first image onto a wall surface of the computer input device; and
upon a predetermined condition associated with a computer program, projecting a second image, different from the first image, onto the wall surface of the computer input device.

31. The method of claim 30, wherein the step of projecting a first image includes projecting an image corresponding to an envelope, a facsimile machine, and a telephone.

32. The method of claim 30, wherein the step of projecting a first image includes projecting an image corresponding to sports team insignia.

33. The method of claim 30, wherein the steps of projecting first and second images includes projecting non-alphanumeric images.